External friction and technological ...

S/148/61/000/001/006/015 A16⁻/A133

sulfurized and mineral oils, oleic acid, water glass, crying oil, soap emulsion, and all these lubricants with different solid fillers, such as silvery graphite, talcum, sulfurous molybdenum, mica, zinc white, organic MoS2, commercial sulfur. The presence of fatty acids in the lutricant speeded up 10 - 20 times the disappearance of roughness, e.g. cleic acid added to the lubricant made a sand-blasted mandrel surface as smooth as class X within a few minutes. In the case of machine oil with graphite the optimum roughness was stated to be 0.5 - 0.9 μ (VIII - IX class finish), and for sulfurous molybdenum with machine oil - 1.5 - 2.0 (VI class). The experiments made it possible to determine the basic requirements for the cold rolling of tubes - to form a tough plasticized layer on the surfaces of tubes and mandrels. Such a layer prevents the sticking of tube metal to the mandrel and evens out deformations in tube wall. It must also have high lubricating properties. Liquid lubricants do not form such layers at the high pressures and temperatures, developed in cold rolling and drawing. Viscous lubricants containing surface-active substances (sulfure or chlorine compounds, or other) or solid fillers (graphite, talcum, mica, or other) can meet the requirements, but the properties of the complex lubricants depend on the lu-

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S/: 18/61/000/001/006/015 A16!/A133

External friction and technological.

bricating properties of the base (liquid lubricant) and the filler, and on the physical and chemical affinity of the liquid lubricant and the filler. It is known that a small amount of silvery graphite increases 8 times the surface area moistened with a drop of machine oil (Ref. 4: I. Lomas, Machinery Lloyd, April 1954; no. 9), but the high antifriction properties of the mixture are due not only to the physical-chemical affinity of the components but also to the high lubricating property of silver graphite. Talcum has a lower antifriction property, and added to cil it does not prevent sticking. Sulfur added to caster bil with talcum reduces the metal pressure on the mill rolls due to its surface activeness, but it affects the copper film coated on tubes. Colloide mixtures containing oleic acid and soap emulsion have the same effect and are not good for tool surface. Colleidal graphite is no good filler. Mica is a better filler than taloun. Sulfurous molybdenum has high antifriction properties in combination with machine or castor oil (Fig. 5). The application method was described previously (Ref. 5: I. M. Pavlov, Yu. F. Shevakin, F. S. Seydalayev. Izv. wyseh. uch. zav. Chernaya metallungiya, 1958, no. 3). Applied to sand-blasted mandrels, MoS, reduced the metal pressure on rolls not less than by 15%, considerably decreased the axial pressure on the billet and raised the work life of man-

Card 3/6

S/1.18/61/000/001/006/015 A161/A133

External friction and technological...

drels 2 - 4 times. In the case of particularly thin-walled tubes, 45.8 x 0.5 mm, from 1Kh19N9T ateel, chromium plated mandrels withstood only 30 m rolled tube, and sand blasted mandrels coated with MoS; withstood 300 m tube. Some difficulties were experienced at the very beginning of rolling on such mandrels. The method described in Ref. 5 is being used. Lubricants with MoSo should not contain any surface-active substances. MoSo forms a highly plasticized layer on surfaces and reduces the wall nonuniformity. The authors think that it is completely wrong to develope the cuter-friction theory from three different points of view - roughness theory, blocking (welding) theory, and molecular theory, for all three are closely interconnected. The major factor in cold tube rolling from carbon steel and nonferrous metals or alloys is mechanical engagement of the rough surface, and in the case of very thin or thin high-alloy steel tubes rolled at a pressure attaining 250 kg/mm2 on the surfaces in contact = it is welding, and only a highly plasticized lubricant layer makes a normal work process possible. Active molecular interaction between the lubricant and the contacting surfaces is necessary to produce such a layer. Conclusions: 1) The external friction conditions in cold tube rolling are considered and

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External friction and technological...

S/148/61/000/001/006/015 A161/A133

the effect of two major factors in the process is determined. 2) A large group of different lubricants and fillers is investigated. The connection is revealed between the lubricating properties of complex lubricants and their components, as well as the role of the affinity of components. 3) A new lubrication method by sulfurous moblybdenum has been developed and tested in practical application. The role and effect of technological lubricants is considered. There are 6 figures and 9 references: 8 Sovietbloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: I. Lomas, Machinery Lloyd, April, 1954, no. 9.

ASSOCIATION: Moskovskiy institut stal (Moscow Steel Institute)

SUBMITTED: January 20, 1960

Card 5/6

s/133/61/000/012/003/006 A054/A127

AUTHORS:

Shevakin, Yu.F., Candidate of Technical Sciences, Docent; Sedykh, G.A., Engineer; Seydaliyev, F.S., Candidate of Technical Sciences; Naumenko, G.N.; Drobot, S.T.; Rumyantsev, N.G.; - Technicians

TITLE:

Cold-rolling stainless steel tubes with increased drafts

PERIODICAL: Stal', no. 12, 1961, 1,105 - 1,107

The degree of draft depends on the stability of the stand, the ductility of the material being rolled and the service life of the operating units. It is known from experience that in the conventional processes the stability of equipment is not utilized in full (the coefficient of the strength of equipment utilization for cold-rolling mills does not exceed 0.5). This factor, therefore, wald permit a higher degree of deformation, which, on the other hand, would definitely shorten the life of the work tools. The service life of the latter could be increased by reducing the number of passes and raising the degree of draft. Tests were carried out to establish the possibilities of coldrolling tubes with greater draft and fewer passes. The tests were made partly on the XIIT -55 (KhPT-55) type rolling mill, with tube: 70 x (5 - 6) mm in size,

Card 1/3

S/133/61/000/012/003/006 A054/A127

Cold-rolling stainless steel tubes with

and partly on the XIIT-75 (KhPT-75) and XIIT-32 (KhPT-32) stands, with tubes 21 x x 1.5 mm in size [93 x (6 - 8) mm \longrightarrow 53 x 3.5 mm \longrightarrow 2:1 x 1.5 mm]. It was found that reducing the number of passes improved the tube quality and rendered the finishing of the inner tube surface more easy. The power consumption for deformation and the tool consumption dropped (the latter by 20 - 25%). When rolling 70 x 6 \longrightarrow 38 x 2 mm tubes, cracks appeared in the finished tubes, due to tension stresses. These could be eliminated by turning over the tube twice on the KhPT-55 stand, which made it possible to increase the feed from 9 - 10 mm to 10 - 12 mm. When rolling 21 \times 1.5 mm tubes according to this new method, buckles were observed on the tube surface, mainly caused by the great conicity of the mandrel and the groove width. To prevent these defects, the conicity of the mandrel was reduced to 0.03 and a considerable drait was applied at the beginning. Thus, buckles no longer formed and the output of the KhPT-55 mill was raised by 20% (the yield of grade-I product was 84% instead of 57% obtained when the first modification of the process was used). The consumption of groove pairs during 6 months was 169 instead of 206 (with the old method), while, moreover, the number of mandrels required decreased from 1,747 to 1,505 during the same period. However, the new rolling process requires material of high ductility. When rolling tubes of 1X18H9T (1Kh18N9T) steel, its strength limit

Card 2/3

Cold-rolling stainless steel tubes with

S/133/61/000/012/003/006 A)54/A127

should not be higher than 65 kg/mm^2 and its relative elongation not less than 39%. There are 5 figures and 1 table.

ASSOCIATION: Moskovskiy institut stali i Yuzhnotrubnyy zavod (Moscow Steel Institute and Yuzhnotrubnyy Plant).

Card 3/3

44580

S/148/62/000/011/005/013 E193/E383

1 1300

Shevakin, Yu.F. and Seydaliyev, F.S. AUTHORS:

Specific features of cold-rolling thin-walled tubes

TITLE: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya

PERIODICAL: metallurgiya, no. 11, 1962, 133 - 139

The object of the present work was to explore the possibility of using existing type of cold-rolling equipment TEXT: (Pilger-type rolls) for fabricating tubes with a wall-thickness less than 0.8 mm. The limitations of the process are imposed by the following factors: roll pressure; axial loads acting on the tube; quality of the finished product; losses in the metal processed; sturdiness and productive capacity of the rolls. The results of the analysis of pertinent experimental data can be summarized as follows: 1) Productive capacity of the rolls: This is usually given as $m\mu_{\sum}$, where m(mm) is the traverse of the tube in one complete rolling cycle and μ is the ratio of the cross-section areas of the tube before and after rolling. For equal values of mu rolling of tubes with thinner walls is effected with smaller Card 1/3

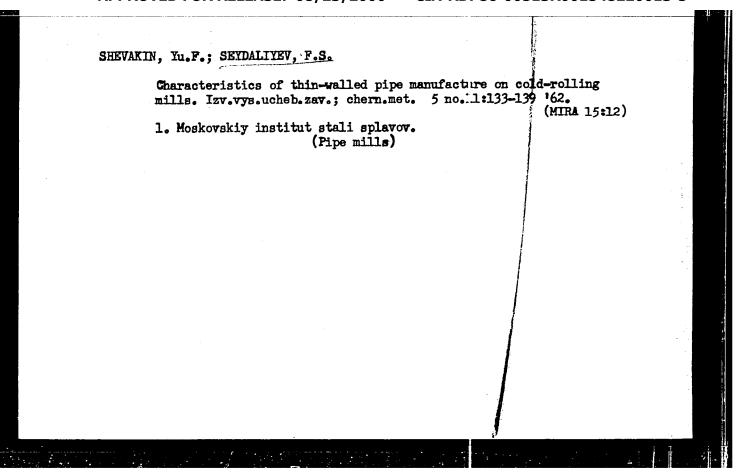
CIA-RDP86-00513R001548220013-5" APPROVED FOR RELEASE: 08/23/2000

S/148/62/000/011/005/013 E193/E383

Specific features of

reductions in the momentary deformation zone and a smaller contact area; since the total roll pressure is also lower, the productive capacity of the rolls cannot be regarded as a factor limiting the thickness of the cold-rolled tubes. 2) Axial loads. The maximum compressive forces acting on the tube do not exceed 10% of the total roll pressure in rolling standard-sized tubes; this value can be doubled or trebled when thin-walled tubes are rolled. This means that in some cases the axial loads during rolling of thin-walled tubes could exceed the yield point of the metal with resultant damage to the end portion of the tube. Both the roll pressure and the axial loads can often be sufficiently reduced by the application of efficient lubricants such as MoS₂. When further

reductions in roll pressure and axial loads are necessary, they can be attained by the following means: a - rotating the tube twice, i.e. before both the forward and reverse movements of the carriage; b - changing the radius ρ_{th} of the pitch circle of the driving gear; the optimum $\rho_{\text{o}}/\rho_{\text{th}}$ ratio (where ρ_{o} is the radius of the roll) has been found to be approximately 1,1. 3) High quality of the final products can be attained by: a - using a mandrel with a Card 2/3



SHEVAKIN, Yu. F., doktor tekhn. nauk; SEYDALIYEV, F. S., kand. tekhn. nauk.

Geometry of the center of deformation during ripe expansion by transverse rolling. Shor. Inst. stall 1 splay. no.40:388-394

162. (Pipe mills)

(Pipe mills)

(Deformations(Mechanics))

AM4016857

BOOK EXPLOITATION

s/

Shevakin, Yuriy Federovich; Ry*tikov, Aleksandr Mikhaylovich; Seydaliyev, Fikrat Seydali-ogly*

Manufacture of nonferrous metal pipe; engineering computations (Proizvodstvo trub iz tsvetny*kh metallov; tekhnologicheskiye raschety*) Moscow, Metallurgizdat, 1963. 356 p. illus., biblio. Errata slip inserted. 2230 copies printed. Editor: K. N. Krucher; Publishing house editor: K. D. Misharina; Technical editor: P. G. Islent'yeva; Cover artist: I. V. Chichkina

TOPIC TAGS: cylindrical pipe, shaped pipe, extrusion, cold rolling, drawing, copper pipe, brass pipe, copper-nickel alloy MNZh5-1, nickel pipe, nickel-alloy pipe, bronze BrOF4-0.25

PURPOSE AND COVERAGE: This book is intended for engineers and technicians at pipe-producing plants and scientific-research and design institutes, and also for senior students specializing in the forming of metals. The manufacture of cylindrical and shaped pipe made of heavy nonferrous metals and alloys by extrusion, cold rolling, and drawing is analyzed. The method of computing the

Card 1/3

AMA016857 forces, the grocve design of the working tool, the initial dimensions of the billet, the number of passes, and efficient technological systems is given for each forming procedure. Each chapter is illustrated with sample computations. Equipment and specifications for pipe made of different alloys, designated by GCST and TU standards, are tabulated. The authors thank Engineers G. N. Strakhov and A. V. Koshurin. TABLE OF CONTENTS (abridged): Foreword - - 3 Introduction --5Section I. Extrusion Ch. I. Brief characterization of equipment and technology - - 11 Ch. II. Forces during extrusion - - 31 Ch. III. Extrusion tool - - 94 Section II. Cold rolling Ch. IV. Brief characterization of rolling mills and technology - - 119 Ch. V. Forces during cold rolling of pipe - - 144 Card 2/3

AM4016857 Ch. VI. Designing the grooves of the working tool in the case of rolling cylindrical pipe - - 175 Ch. VII. Designing the grooves of the working tool in the case of rolling shaped pipe - - 207 Section III. Drawing Ch. VIII. Brief characterization of equipment and technology - - 255 Ch. IX. Forces during drawing - - 266 Ch. X. Designing the grooves in the tool and computing the course of drawing Literature - - 349 SUB CODE: ML SUBMITTED: 10Ju163 NR REF SOV: OTHER: 012 DATE ACQ: 10Dec63 _{Card} 3/3

SEYDALIYEV, F.S.; SHAYKEVICH, V.S.; KOZLOV, O.F.; SFEVAKIN, Yu.F.

Experimental investigation of metal shape changing during the pipe expansion process with conical rolls. Izv. vys. ucheb. zav.; chern. met. 6 no.7:112-116 '63. (MIRA 16:9)

1. Moskovskiy institut stali i splavov.
(Pipe mills)

Calculating reductions during the cross rolling of pipe on mandrells. Izv. vys. ucheb. zav.; chern. met. 6 no.9:114- (MIRA 16:11)

l. Moskovskiy institut stali i splavov.

119 163.

KOZLOV, O.F.; SHEVAKIN, Yu.F.; SEYDALIYEV, F.S.

Contact surface during the cross rolling of pipe on a cylindrical mandrel. Izv. vys. ucheb. zav.; chern. met. 7 no.9:81-87 '64. (MIRA 17:6)

1. Moskovskiy institut stali i splavov.

SHEVAKIN, Yu.F.; SHAYKEVICH, V.S.; SEYDALIYEV, F.S.

Determining the specific and full pressure during the rell expansion of tubes. Izv. vys. ucheb. zav.; chem. met. 8 no.13 (MTRA 18:1)

1. Moskovskiy institut stali i splavov.

Specific pressure during cold transverse plug rolling of tubes.

lzv. vys. ucheb. zav.; chern. met. 8 no.ls71-77 165

(NIRA 1821)

1. Moskovskiy institut stali i splavov.

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	M. V.; Seydalinating stress schools, 70.5, 1965 ress analysis, mutigated the conditing mechanical ce. One and two tensile strengthing the ductility compared with sire noticed. Dif	mating stress scheme on the mech giya, no. 5, 1965, 82-84 ress analysis, metal mech anical tigated the condition of stress are one and two rotations of tensile strength (7-1/3) and yie to compared with sheet rolling anical mechanical proper icompared with sheet rolling anical strength (7-1/3) and yie compared with sheet rolling anical strength (7-1/3).	nating stress scheme on the mechanic

L 54725-65 ACCESSION NR: AP5013323		7
reverse pass become areas of Cold rolling of tube can thu	s be regarded as deformat stress from one cycle add . Since the residual str he energy requirements for	ion under a scheme of after- ing algebraically to the stress ess from the previous cycle is
ASSOCIATION: Moskovskiy ins Alloys)	titut stali i splavov (Mo	sco Institute of Steel and
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	等。在1967年的1968年代,1968年代	

SHEVAKIN, Yu.F.; SHAYKEVICH, V.S.; SEYDALIYEV, F.S.

Speed conditions in the process of roller expansion of tubes.

Izv. vys. ucheb. zav.; chern. net. 8 no.5: 38-104 165.

(MIRA 18:5)

1. Moskovskiy institut stali i splavov.

ACCESSION NR: AF	/EWP(t)/EWP(k)/EWP(b)/EWA(c)	UR/0:.49/6	5/000/001/013	10.4	
		daliyev, F. S.	5	39	
TITLE: Investiga	tion of the process of transv	verse tube : olli	ng 18,47,55	36- 18	
SOURCE: IVUZ. Te	svetnaya metallurgiya, no. 1,	1965, 136-141			
	al tube, metal rolling, plast	in deformation			
TOPIC TAGS: meta	at tube, metal rolling, plant	Te delormeron		amania	
ABSTRACT: The formetally studied to by a driven mand: posite sides of supporting sectition. The axial lute reduction i process. An osc gauges and ampli	undamental characteristics of using stock with dimensions or rel with non-driven rolls. The workpiece and had a complon, a collar, a cylindrical g feed of the workpiece, the an wall thickness were varied illographic record of the for fying equipment. Deformation be before reaching the deformation to the hardness of the metal	the tube rolling f 146 × 5.5-8 mm. The working rolls ex shape consist prooving band and make of the roll within wide limit ree parameters were parameters were point and the rolling point and the rolling rolling point and the rolling rolli	were located ing of a cyling of a tapered to la tapered to lits during the las kept by use determining	on op- Indrical ail sec- the abso- e rolling ing strain the dimen- nsions at	

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ACCESSION NR: AP5013074			
and length of the specimen. A reductions in wall thickness a stresses arise in the metal ah of the metal. Thus the surface of the roll flange. This metal axial stresses, and equilibrium es reach a certain minimum value the deformation source causing spect to thickness. Outside the duced and the cross section is an increase in the length of this type of deformation increase doubled. Orig: art. has:	ead of the collar which ead of the collar which the metal is sheared off in buildup (increase in mis reached at the delue. The metal buildup nonuniformity in defeate contact zone, the increased, while at the specimen and a reduction of the contact to the specimen and a reduction of the	ch exceed the shear and there is a but a wall thickness) reformation point who increases the dimportantion of the method in the deformation point the deformation point in tubular con since the contact	ing strength ildup ahead educes the een the stress- eensions of cal with re- iece is re- int there is cross section. et surface may
ASSOCIATION: Kafedra tekhnolo	ogii i avtomatizatsii	, CO.: 110-1-01	istva Moskov-
Rolling Production, Hoscow In	ENCL: 00	11oy 3) 74,55 SUB CODI	S: IE, MM
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SHEVAKIN, Yu.F.; POPOV, M.V.; SEYDALIYEV, F.S.; ODINTSOV, B.F.

CONTROL OF THE PARTY OF THE PAR

Investigating strains in the connecting rods of cold pipe rolling mills with counterweight balancing. Izv. vys. ucheb. zav.; chern. met. 8 no.7s 124-127 165. (MIRA 18:7)

1. Moskovskiy institut stali i splavov i Ukrainskiy nauchno-issledovatel-skiy trubnyy institut.

PAVLOV, I.M., prof.; SHEVAKIN, Yu.P., kand.tekhn.nauk; SEYDALTYEV, Yu.S., inzh.

Using sulfurous molybdenum as a lubricant in the cold rolling of pipe.

Izv. vys. ucheb. zav.; chern. net. no.7:191-193 J1 '58.

(MIRA 11:10)

1. Moskovskiy institut stali. 2 Chlen-korrespondent AN SSSR (for Pavlov).

(Metal-working lubricants)

SEYDAMENTOV, YA. A. "Results of Tests Performed with Ultra-sulfur in Oidium Control of Grapes,"

Zashchita Rastenii, no. 16, 1936 pp. 95-162.

821 P942

S0: SIMA SI-90-53, 15, Dec. 1953

SEYDEL, EDBAR.

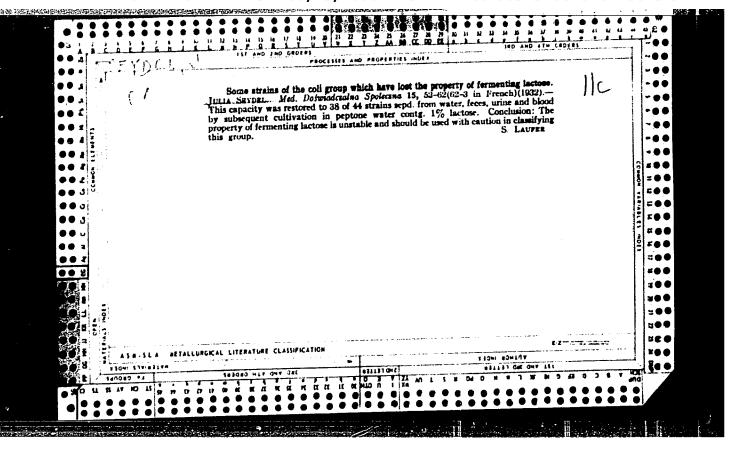
SEYDEL, Edgar

Yugoslavia (430)

Technology

Naprezanja u pantlijicastim fundamentimi pri stepenasto promenljivom gradevnom tlu. Beograd, Gradevinska knjiga, 1950. 23p. (Savezni institut za gradevinarstvo; Grupa: Konstrukcije. Publikacija, br. 3) (Stresses in foundation beams with abruptly changing foundation soil. Bibl.)

East European Accessions List. Library of Congress. Vol 2. no 3, March 1953. UNCLASSIFIED



SMYDEL, J., WALECKI, H., WISHIEMSKA, Z.

THE PROPERTY OF

Evaluation slide method of determination of virulence of Gorynebacterium diphtheriae. Przegl. epidem. 7 no.3:171-178 (GIML 25:5)

1. Of the State Institute of Hygiene, Warsaw.

STEPANOV, V.P.; MAKSIMOV, S.I.; GAVRILOV, M.N.; SEYDEL, L.R.

是是可能的,并不是是自己的的。这种的,我们就是是是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就是一个人,我们就

Electronic instrument for measuring the interface level of raffinate and extract solutions. Mash. i neft. obor. no.3:22-25 164. (MIRA 17:5)

1. Nauchno-issledovatel skiy i proyektnyy institut po kompleksnoy avtomatizatsii proizvodstvennykh protsessov v neftyanoy i khimicheskoy promyshlennosti.

PODLEGATEV, M., kand.tekhn.nauk; SEYDEL', Ye.

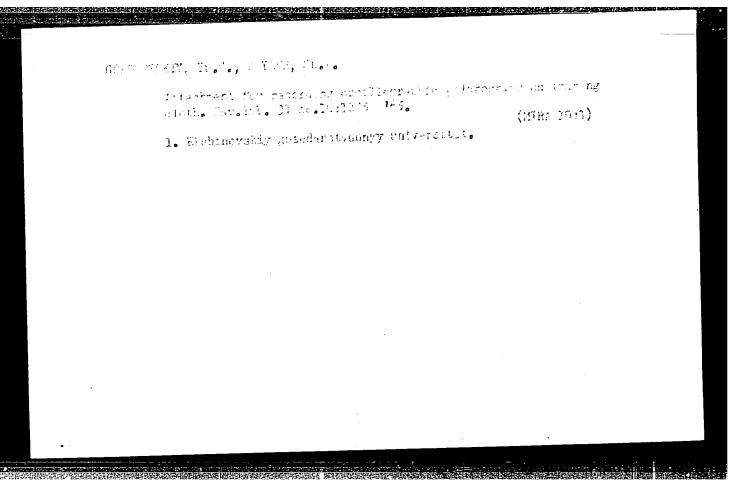
Technology of the production of egg melange in England. Miaż.
ind.SSSR 31 no.5:61-62 '60. (MIRA 13:9)

(Great Britain—Eggs—Preservation)

ELAYVAS, L., inzh: SEYDER, E., inzh: PUSHCHENKO, V., inzh.

Extension indicator of the radar station "Don." Mer. flot 21 (MIRA 14:6) no. 6:18-19 Je '61.

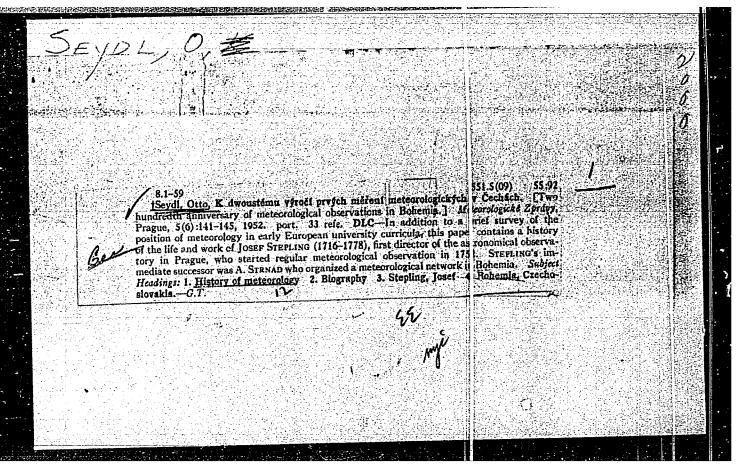
(Radar in navigation)

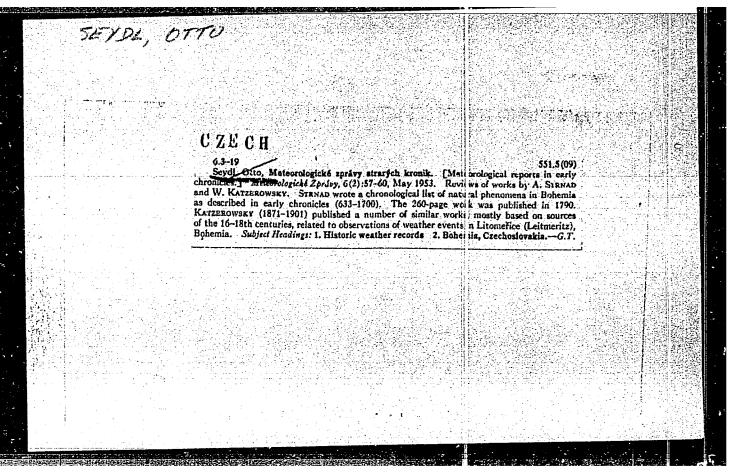


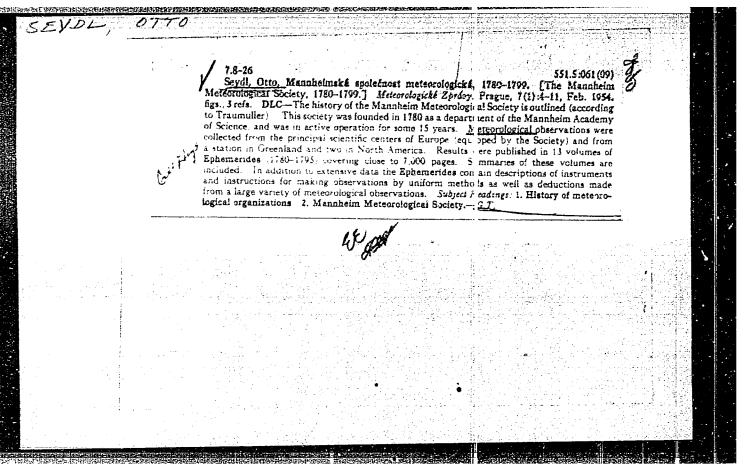
SEYDL, 0.

"History of the Museum Mathematicum Jesuitarium in the College of St. Clemens in the Old Town in Prague. p. 1-59." (VESTNIK, 1951, Praha, Czechoslovakia)

So: Monthly List of East European Accessions, LC, Vol. 3, No. 5, May 1954/Unclassified



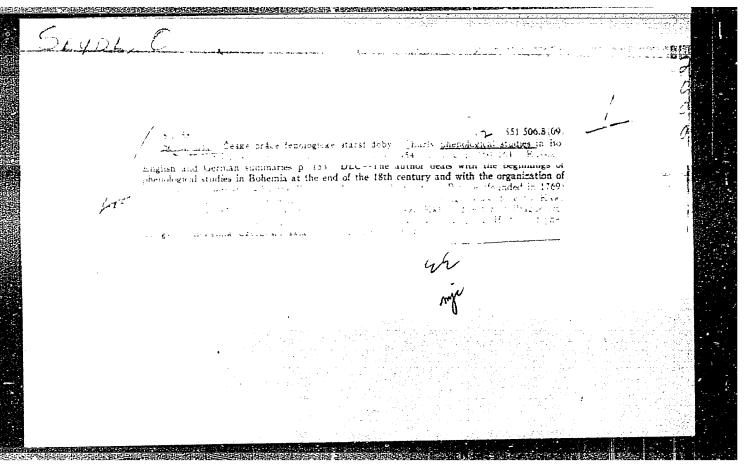


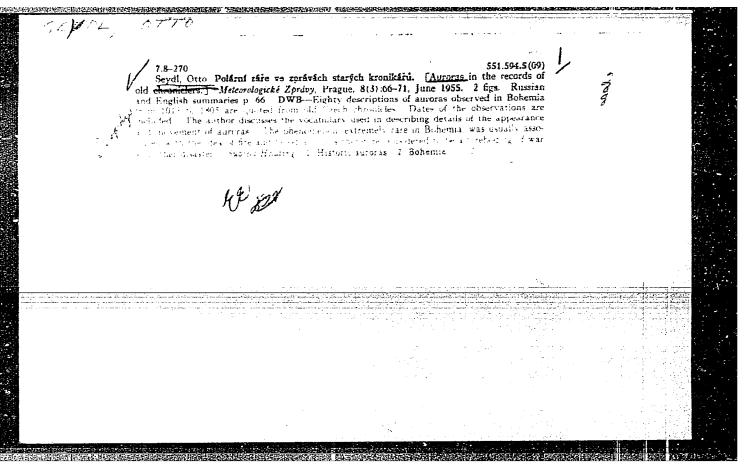


SEYDL., O.

Meteorologic platform at the Prague Observatory in Klementinum. p. 130. Prague. METEOROLOGICKE ZPRAVY. Vo. 7, no. 5. No. 1954.

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, no. 3, March 1956.





SEYDL, O.

"Two hundredth anniversary of the birth of P. Martin Alois David (1757-1957)."

p. 137 (Meteorologicke Zpravy, Vol. 10, no. 6, Dec. 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 9, September 1958

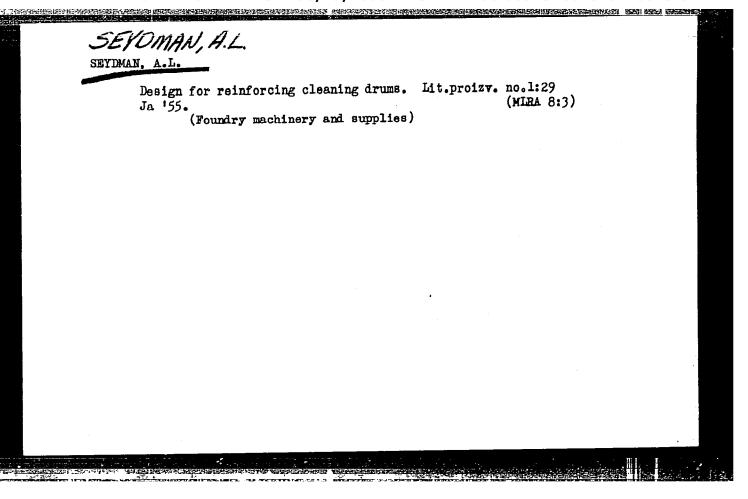
SEYDEMAGEV, Yv. M.

Chang- in the meatiness of sheep of the farakh argeli breed as related to the spe and the consistons of maintenance. Izv. AM Kanakh. SSR. Sor. biol. mask 2 no.3:63-75 My-Je fou.

(MIPA 17:10)

SEYDMAN, A.L., inzhener.

Design ef diaphragm mechanisms. Stan. i inst. 18 me.9:23 S 147.
(Chucks-Design) (MIRA 9:1)



AUTHOR:

Seydman, A.L., Engineer

SOV/118-58-12-12/17

TITLE:

The Single-Bucket Hydraulic Excavator of the Type PEG-1

(Odnokovshovyy gidravlicheskiy ekskavator PEG-1)

PERIODICAL:

Mekhanizatsiya trudoyemkikh i tyazhelykh rabot, 1958, Nr 12,

pp 38 - 39 (USSR)

ABSTRACT:

Giprotopprom has designed, and the Orekhovo-Zuyevskiy zavod "Torfmash" (the Orekhovo-Zuyevo "Torfmash" Plant) has produced and tested, a new tractor-drawn caterpillar excavator of the type PEG-1 equipped with a bucket of 0.2 cu meter capacity. The excavator can perform 6 different operations and its interchangeable equipment consists of a general purpose direct and reverse bucket, a crane suspension, an additional bucket of 0.5 cu meter capacity for the loading of peat, forks, and a profile shaped bucket. The excavator digs holes and ditches of various widths, loads loose material, peat etc. The crane suspension arm has a lifting capacity of 1.5 tons. It is planned to equip the excavator in the future with various additional devices. There is 1 table and 1 diagram.

Card 1/1

L 23709-66 EWT(m)/EWP(j)/T LJP(c) RM/WW

ACC NR: AP6009425 (A) SOURCE CODE: UR/0020/66/166/006/1376/1377

AUTHOR: Seydov, N. M. (Academician AN AzerbSSR); Dalin, M. A.; Abasov, A. I.

ORG: All-Union Scientific Research Technological Institute on the Synthesis and Processing of Low-Molecular Olefins Paku (Vsesoyuznyy nauchno-issle-

dovatel'skiy tekhnologicheskiy institut po polucheniyu i pererabotke nizkomolekulyarnykh olefinov); Experimental Plant, Baku (Opytnyy zavod)

TITLE: Copolymerization of ethylene and propylene in a liquid propylene medium

SOURCE: AN SSSR. Doklady, v. 166, no. 6, 1966, 1376-1377

TOPIC TAGS: ethylene, propylene, copolymerization

ABSTRACT: A study of the copolymerization of ethylene and propylene in the presence of vanadium triacetylacetonate (catalyst) with diisobutylaluminum chloride (cocatalyst) in liquid propylene is described. The components of the catalyst system were fed separately into the reaction zone in a stream of nitrogen: the catalyst in a 5% benzene solution and the cocatalyst in a 5% ligroin solution. The experiments were carried out in the -20° to +50°C range with an ethylene content of 4 to 15 mol % in the liquid phase. It was found that as the Al/V molar ratio increases, the yield of copolymer goes through a maximum and the intrinsic viscosity of the copolymer simultaneously decreases. The composition of the liquid phase and temperature have a more substantial effect on the copolymerization process. Thus, as the ethylene content of the li-

Card 1/2

UDC: 678-13

quid phase rises, the molecular weight and yield of the copolymer increase and the reaction rate is accelerated. At the same time, the average lifetime of the catalyst becomes appreciably shorter. A stable reaction rate is observed at a 4% content of				
becomes appreciab	oly shorter. A stable real temporature rises, the i	ction rate is observed ntrinsic viscosity of	the copolymer falls	
aff From the co	polymers obtained, a rubblicumyl peroxide. Orig.	er mixture was prepare	od murcu mas Antequit	zed
SUB CODE: 07/	SUBM DATE: 26May65/	ORIG REF: 002/	OTH REF: 009	
308 CODE: 077	Jobn biller wondy			
			And the second second	-

BAKAYEV, M.T.; NUCMANOV, K.Kh.; SEYDUALIYEV, Z.S.; IBRAYEV, Sh.I.; ULUKBEKOV, O.K.; MUSIN, A.Ch.; doktor tekhn. nauk, prof., red.; ABDRAKHMANOV, A., kand. filolog. nauk; ASAINGV, M., red.; AYTNUKHAMBETOVA, S., red.; ZHUKOVA, N.D., red.; KHUDYAKOV, A.G., tekhn. red.

[Russian-Kazakh dictionary of terminology]Russko-kazakhskii terminologicheskii slovari. Alma-Ata, Izd-vo Akad. nauk Kazakhskei SSR. Vol.12[Mining]Gornoe dele. 1962. 281 p. (MIRA 15:11)

1. Akademiya nauk Kazakhskoy SSR, Alma-Ata. Institut yazy-koznaniya.

(Mining engineering Dictionaries)
(Russian language Dictionaries Kazakh)

SEYDUZOVA, S.S.; GROSS, I.Ch.; YESINA, A.I.; TROSTYANSKIY, G.D.

Regularities in the attenuation with distance of the density of the energy flow of seismic vibrations at periods of 0.3 to 019 seconds in Central Asia. Trudy Inst. mat. AN Uz. SSR no.25:133-146 '62. (MIRA 16:8)

(Soviet Central Asia -- Seismology)

USSR/Chemistry - Stearates Jul 49
Chemistry - Alkali Metals

"Softening Points of Oleogels of Metal Stearates,"
A. L. Sygfer, 1-5/4 pp

"Dok Ak Nauk SSSR" Vol LXVII, No 2

Prepared oleogels of alkali-metal stearates with 30% etearate content by heating a mixture of MVP vaseline oil with stearic acid and concentrated caustic acids or by introducing specially prepared stearates of the general MeSt, formula into heated vaseline oil. Drop point of oleogels proved to be in inverse ratio to the ion potential. Submitted by Acad S. S. Nametkin 27 Apr 49.

SETFER, A.L. (Baku)

Corrosion of metals by sea air and water, Priroda 44 no.12:78-79
D '55.

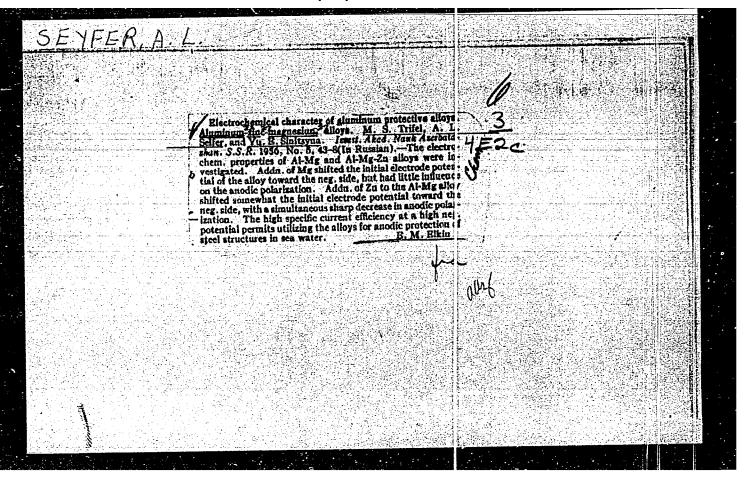
(Corrosion and anticorrosives)

SEYFER, A. L.

SEYFER, A. L. -- "The Protective Properties of Aluminum Smelted with Elements of the Second Group of the Periodic System." Ural Polytechnical Institute imeni S. M. Kirov, Chair of Analytical Chemistry, Sverdlovsk, 1956. (Dissertation for the Degree of Candidate of Chemical Sciences)

SO: Knizhnava Letopis' No 44, October 1956, Moscow

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548220013-5



SEYFER A.L.

Protection against salt corrosion. Priroda 45 no.10:84-85 0 '56. (MLRA 9:11)

1. Nauchno-issledovatel'skiy i proyektnyy institut Gipromorneft'. Baku.

(Corrosion and anticorrosives)

137-58-2-3531

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 179 (USSR)

AUTHOR: Seyfer, A.L.

S = 41 - 1

Protective Properties of Aluminum Alloys Containing Elements TITLE:

in Group II of the Periodic Table (Protektornyye svoystva

splavov alyuminiya s elementami vtorov gruppy periodicheskoy

sistemy)

Elmi kherler. Azerb. univ., Uch zap. Azerb. un-t, 1957, PERIODICAL:

Nr 1, pp 39-53

An investigation was made of the protective properties of ABSTRACT:

binary and ternary Al alloys with Li, Be, Mg, Ca, Sr, Ba, Zn, and Cd in Caspian Sea water, in 0.5N NaCl and 0.5N Na₂SO₄ solution. A measure of the resistance to corrosion was found in the difference in the potentials of the cathode and anode as a function of the polarizing current. Technically pure Al was taken as a standard of comparison for the upper limit and Mg alloy (ML-4) was taken as that for the lower limit. It is shown that in sea water and in NaCl solution the nature of the anode polarization with elements of the basic

subgroup of group II of the periodic table is determined by the

Card 1/2

137-58-2-3531

Protective Properties of Aluminum (cont.)

destructibility of the protective oxide film by corrosion products. It was found that in Na2SO4 solutions the anode polarization of Al alloys with elements of the Ca subgroup is more significant than in other electrolytes. In that case, what occurs is not destruction of the protective film, but hardening of the film by formation of Ca, Sr, Ba sulfates on the surface of the metal. It was established that the ability of Zn to induce structural imperfection of the protective film in Al alloys is retained when a third component is introduced into the alloy (Li, Mg, or elements of the Ca subgroup). Simultaneously, these ternary alloys retain the ability of these elements to increase the electrically negative character of the entire system. It was found that Cd has, to an even greater extent than Zn, the ability to cause structural imperfections in the protective film of the protector. The corrosion strength of the alloys under investigation was evaluated in all 3 electrolytes by the method of Negreyev and Allakhverdiyev at operational D's. The employment of protectors made of ternary Al alloys for protection against corrosion by sea water and soil is proposed. Also see RzhMet, 1957, Nr 4, abstract 6481. I.B.

1. Aluminum alloys--Corrosion resistance--Test results

•

Card 2/2

Anodic polarizability in the neutral electrolytes of aluminum-alkaline earth alloys. Dokl. Am SSSR 116 no.1:120-122 S-0 '57.

(MIRA 11:3)

1. Predstavlenc akademikom I.I. Chernyayevym.

(Aluminum-alkaline earth alloys)

28(2)

SOV/26-59-5-20/47

AUTHORS:

Vleduts, G.E., Seyfer, A.L., (andidates of Chemical

Scrence

TITLE:

Electronic Computer Information in Chemistry

PERIODICAL:

Priroda, 1959, Nr 5, pp 86 - 88 (USSR)

ABSTRACT:

The authors refer to the growing use of computers in economic planning, direction of production, and in solving technical problems. In particular, they

describe the use of computers in selecting and

summing up information, in respect to specific items, scattered over the great mass of published material. Such work is carried out sometimes in 10 - 15 min, including the work of the machine itself of only 1 min. The director of the Moscow Electromodelling Laboratory is Professor L.I. Gutenmakher. There are 2 diagrams and 4 references, 3 of which are

Card 1/2

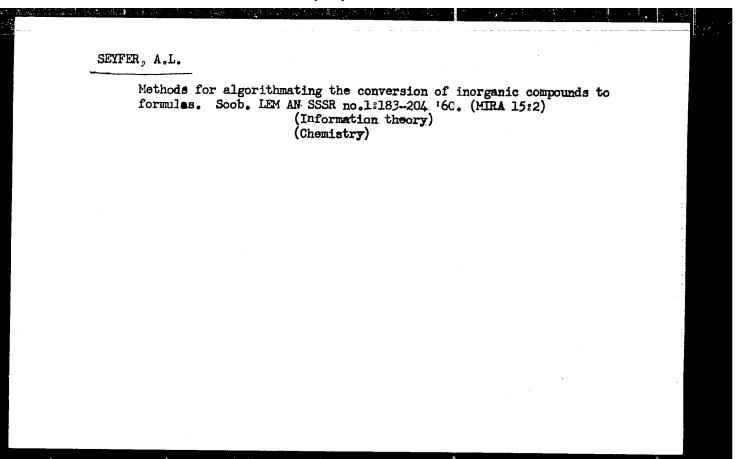
English and 1 Soviet.

Concerning the conversion algorithm of a complex compound given in a rational nomenclature to a linear formula.

Soob. LEM AN SSSR no.1:172-183 '60. (MIRA 15:2)

(Chemistry)

(Information theory)



28.2000 1013, 1031, 1121 25575

S/078/61/006/008/003/018 B121/B203

AUTHORS:

Seyfer, A. L., Shteyn, V. S., and Shchurova, S. S.

TITLE:

Use of electron computers for transducing names of complex compounds into formulas

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 6, no. 8, 1961, 1759-1761

TEXT: The authors give some chemical and logical principles for transducing names of complex compounds into formulas with a universal electron computer of the type 134-1 (LEM-1). The use of electron computers is made on the basis of four basic blocks:

(1) block for the separation of syllables,

(2) analytic block,

(3) block for combinations,

(4) block for the synthesis of formulas.

In block (1), the chemical compound is divided into single syllables.

The formula is simplified in block (2). Block (3) records parantheses and indices of formulas. Block (4) distributes parantheses and indices of complex compounds as dependent on the number of ligands and the character of complex compounds (anionic and cationic). The entire process from Card 1/2

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S/0"8/61/006/008/003/018 B12-/B203

Use of electron computers...

introducing the name of the complex compound to the printing of the formula is automatic and consists of 3500 - 6000 legical and arithmetical operations. It takes 3-5 seconds. The process is explained with the aid of examples such as: dicyano-(1+)-potassium argentate was introduced; the electron computer supplied the following figures: 00212 00001 37777 00201 00001 00205 00002 37777 00001, which correspond to the formula: K₁(Ag₁,(CN)₂)₁. There are 1 table and 8 references: 7 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: Ref. 7: JUPAC, Nomenclature of Inorganic Chemistry, 1957. Report of the Commission of Nomenclature of Inorganic Chemistry, L, 1959.

ASSOCIATION: Institut nauchnoy informatsii Akademit nauk SSSR (Institute of Scientific Information of the Academy of Sciences USSR)

SUBMITTED: May 5, 1960

Card 2/2

SEYFER, A.L.; SHTEYN, V.S.

Topology of the diagrams: composition - property for binary systems.
Zhur.neorg.khim. 6 no.12:2719-2723 D '61. (MIRA 14:12)

1. Institut nauchnoy informatsii AN SSSR.
(Systems (Chemistry))

SEYFER, A.L.; SHCHUROVA, S.S.; POLYUSUK, Yu.A.

Automatic information retrieval system for inorganic compounds. NTI no.10:26-29 '63. (MIRA 17:1)

SEYFER, A.L.; SMOLENSKIY, Ye.A.

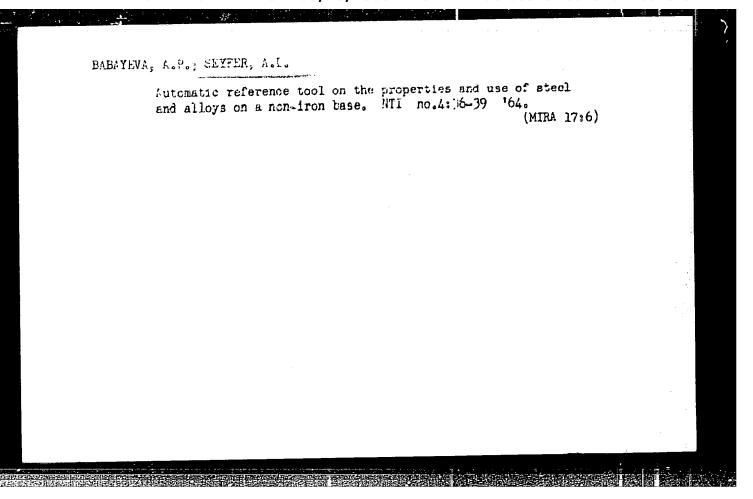
Formal method of correlating properties of alkanes. Part 1. Zhur. fiz. khim. 37 no.12:2657-2662 D '63. (MIRA 17:1)

1. Institut nauchnoy informatsii AN SSSR.

VASIL'YEV, A.M., doktor tekhn. nauk, red.; SEYFER, A.L., kand. khim. nauk, red.; SHREYDER, Yu.A., karxi. fiz.-mat. nauk, red.; KRITSKAYA, Z.P., red.

[Informational systems] Informatsionnye sistemy. Moskva, In-t nauchn. informatsii, 1964. 176 p. (MIRA 17:12)

1. Abademiya mauk 338%. Inutitut mauchney informateii.



SEYFER, A.L.; SMOLENSKIY, Ye.A.

Formal method of finding regularities in the properties of alkanes. Zhur. fiz. khim. 38 no.1:202-203 Ja 64. (MIRA 17:2)

1. Institut nauchnoy informatsii AN SSSR.

SEFFER A.I., SMOLENSKIY, Ye.A.

Taking the interaction of pairs of bonds into account in the determination of the properties of alkanes. Zhur. fiz. khim. 38 no.9:2230-2234 S 164. (MIRA 17:12)

l. Institut nauchnoy informateii AN SSSR, Moskva.

L 38548-65 EWT(d)/TDB(jj)/EXT/T/EED-2/EWP(l) -Pq-4/Pg-4/Pk-4 IJP(c) EB/GC-ACCESSION NR: AP5007985 S/0315/65/000/001/0023/0025

AUTHORS: Seyfer, A. L.; Matveyeva, A. A.; Pantyukhina, M. Ye.

TITLE: Machine translation of formulae of inorganic compounds in systematic nomenclature

SOURCE: Nauchno-tekhnicheskaya informatsiya, no. 1, 1965, 23-25

TOPIC TAGS: chemical identification technique, information storage and retrieval, chemical, chemistry, information processing, data processing / Ural 4 computer

ABSTRACT: The problem of selecting a standardized system of inorganic compound nomenclature so that it is possible to store, retrieve, and process chemical formulae in computer memory is discussed. The requirements of such a language are: 1) that it be formal and nonambiguous, 2) that it be processable by a computer with a minimal complement of peripheral equipment, 3) that it be absolutely universal, i.e., that it cover all possible inorganic compounds. A review of extant and proposed chemical nomenclature systems is included. Note is made of ambiguities and limitations found in each. The nomenclature of B. V. Nekrascov (Ratsional'naya nomenklatura neorganicheskikh soyedineniy. "Khimiya v shkole" 1964, No. 10, 48) was used in the pilot system. If a formula is represented in

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L 38548-65

ACCESSION NR: AP5007985

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the form Aa Bb Cc Dd..., the form aA bB cC dD can be used in the translation. The translator process takes place on a Ural-4 computer with the aid of a stored chemical dictionary with elements, valences, and atomic groups. The majority of elements are stored by their Russian names. The atomic grouping consists of 100 dictionary entries stored according to terminology generally accepted in chemical literature. Translation of a single name requires less than one second of machine time; the program for translation consists of 2000 instructions. Several examples of translation are given.

ASSOCIATION: none

SUBMITTED: 050ct64

ENCL: CO

SUB CODE:

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NO REF SOV: 008

OTHER: 001

(U) Card 2/2

L 39317-65 EWT(d)/TDB(jj)/EEC(f)/BXT/EED-2/EWP(1) Pq-4/Pg-4/Pk-4 IJP(c)
AVH/BB/GG/JXT(EF)

ACCESSION NR: AP5005853

s/0028/65/000/001/0048/0052

AUTHORS: Seyfer, A. L. (Candidate of chemical sciences); Shurova, S. S.

TITLE: Automatic information system for properties of substances

SOURCE: Standartizatsiya, no. 1, 1965, 48-52

TOPIC TAGS: data processing system, inorganic compound, chemical property, information storage and retrieval / Ural 4 computer

ARSTRACT: An experimental automatic information-logistics system for physico-chemical properties of substances has been established at VINITI. The syster uses a medium class universal computer of the type "Ural-4" which has an operating memory (ferrite core) of 2048 words (40 binary bits each) and has several magnetic drum (16 000 words each) and magnetic tape (64 000 words each) memories. Input is from punched tapes or cards, and output is either on punched cards or printed. Of the 300 or so different kinds of properties which are widely used (primarily physico-chemical properties are of interest here), 120 of the most important ones can be used in the system: thermo-chemical (temperature and heat of phase changes, energy and entropy of formation); thermo-physical (vapor pressure, solubility, density, viscosity); bond length and angle; optical (refraction, polarization).

Card 1/2

L 39317-65 ACCESSION NR: AP5005853

magnetic, etc. All properties are coded, forming three types: a) those that can be answered by "yes" or "no;" b) numerical characteristics; c) coefficients which go into some equation describing the property. The system, at present, has only in regards compound properties, but only 7-6% of the total required data are available; the other 92-93% represent "voids," primarily because many of the properties have not yet been investigated or published. Three types of searches can be performed on the stored data: a) find and print out certain properties of certain compounds; b) find and print out all properties of a certain compound; c) find and print out all compounds meeting cartain restrictions on their properties (for example, all compounds which melt between 150 and 1800). A special property batching procedure in the memory reduces search time of a "property packet" (40 compounds) and search within the packet for a type C search to 5-6 seconds. A type C search of all inorganic compounds takes 20-25 min. By inverting the cata storage according to properties rather than compounds, it is hoped to decrease the 20-25 minutes to 1 minute for the class C search. Orig. art. has: 2 figures. AGSOCIATION: Laboratoriya elektromodelirovaniya VINITI (Electromodeling Laboratory of the VINITI)

SUBMITTED: 00

ENCL: 00

SUB CODE: DP, IC

NO REF SOV: 003

OTHER: 001

SMOLENSKIY, Ye.A.; SEYFER, A.L.; GALICHENKO, G.L.

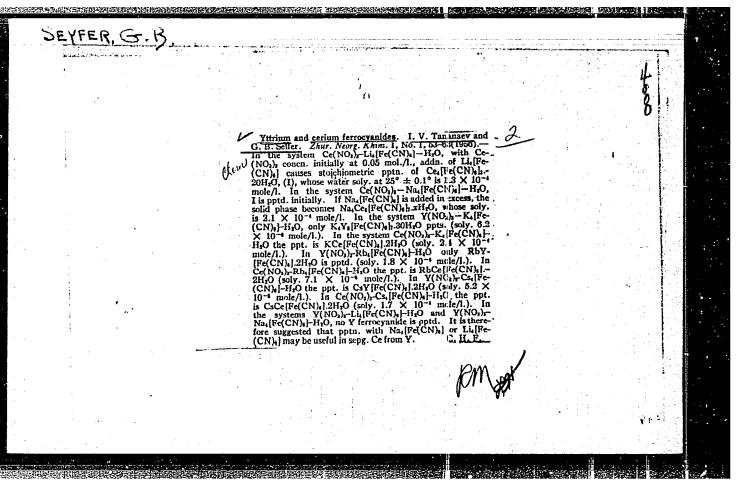
Approximate method of calculating the physicochemical properties of compounds of the $A(R_{\frac{1}{2} \cdot \cdot \cdot} R_k)$ type. Zhur. fiz. khim. 39 no.9:2142-2144 S 165. (MIRA 18:10)

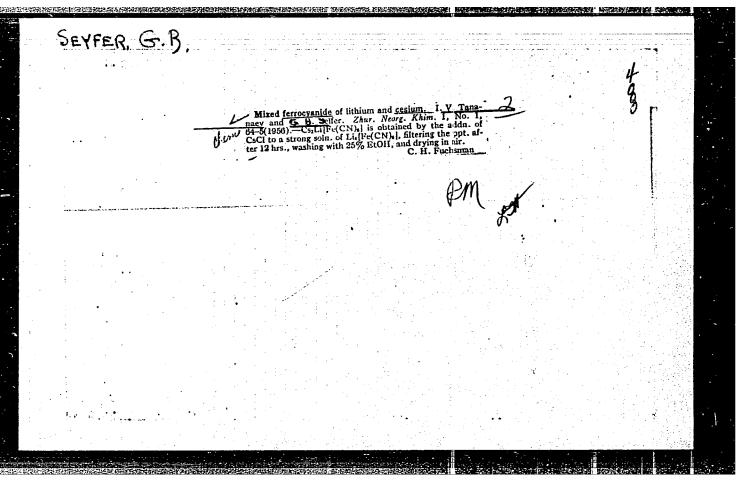
TANANATEV, I.V.; GIUSHKOVA, M.A.; SETTER, Q.B.

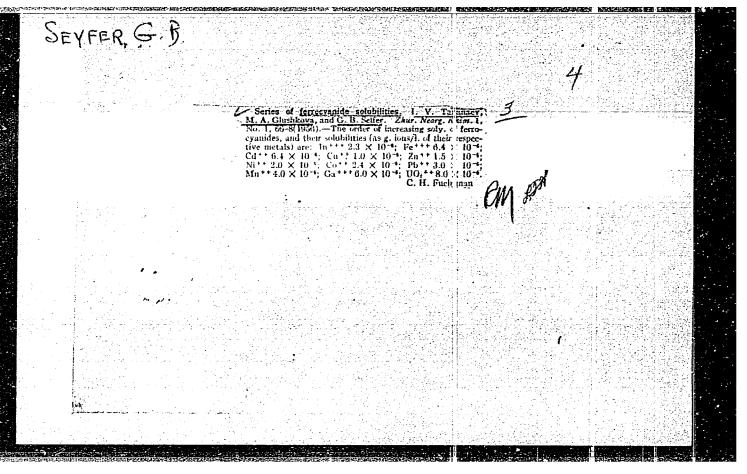
Chemistry of lanthanum ferrocyanides and their application in analytic chemistry. Khim.redk.elem. no.1:58-86 '54. (MIRA 8:3)

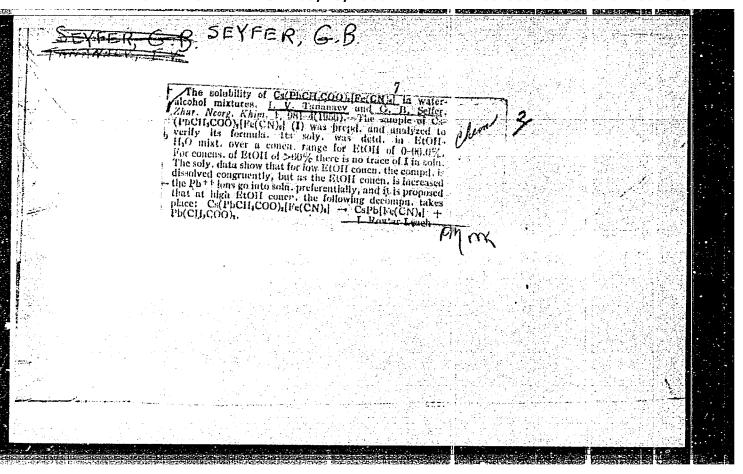
1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova AN SSSR.

(Lanthanum ferrocyanide)









USSR/Inorganic Chemistry - Complex Compounds.

THE PROPERTY OF THE PROPERTY O

C.

: Ref Zhur - Khimiya, No 9, 1957, 30291 Abs Jour

Author

: Tananayev, I.V., Seyfer, G.B.

Inst

Title

HETTER . Fo. B

: Mixed Ferrocyanides of Magnesium, Rubidium and Cesium

Orig Pub

: Zh. neorgan. khimii, 1956, 1, No 9, 2017-2023

Abst

: On the basis of the results of a study of the system MC1 - Mg / Fe(CN) /-H,0, wherein M is Rb or Cs, by the solubility method, it was found that the composition of the solid phase that separates, corresponds to the formula 3M4/ Fe(CN), 7.4Mg, Fe(CN), 7.12H, 0. The composition is not altered on use of an excess of both components, in the case of Rb, while in the case of Cs, an ex-

cess of Mg₂/Fe(CN)₆/causes the formation of Cs₄/Fe(CN)₆/.2Mg₂/Fe(CN)₆/.1OH₂O.

Card 1/1

Ferrocyanides of Trivalent Iron (Cont.)

560

in excess (systems with K_4 (Rb_4 , Cs_4) Fe (Ch) $_6$), an effect evidently due to coprecipitation of the alkali metal.

M₄ Fe (Ch) $_6$ enters the precipitate as soon as the precipitation of iron is complete even with lithium and sodium. This is especially pronounced with rubidium and caesium. The contents of alkali metal in the precipitate increased according to the series K - Rb - Cs.

It appears that with potassium, rubidium and caesium mixed salts of the simplest type M Fe [Fe (Cn)6] are formed at first. It is very likely that the salts RoFe [Fe(Cn)6] and CsFe [Fe(Cn)6] do exist, but they react easily with M4 [Fe(Cn)6] to form a second mixed salt of the composition M6Fe2 [Fe(Cn)6]3.

Although the continued adsorption of M₄ [Fe(Cn)₆] by the precipitate makes the interpretation of the experimental curves difficult the possibility of the formation of new incongruently soluble mixed salts of definite composition is not excluded.

As regards the strength of the bond in mixed ferrocyanides of iron and alkali metals, the latter can be arranged in the usual series with caesium having the greater strength and lithium the least. Apparently in the mixed salts the alkali metals can mutually replace each other according to the above order. From this point of view mixed ferrocyanides of trivalent iron can be considered as inorganic prototypes of ion-exchange resins.

14 Figures and 5 Tables.

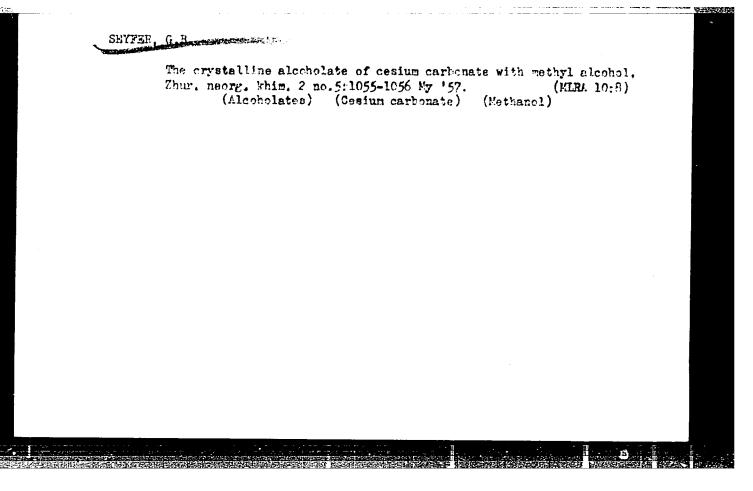
Card 2/2

78-3-15/35

Mixed Ferrocyanides of Calcium with Rubidium and Caesium.

 $[Fe(CN)_6]^{4-}$: Rb+ and of $[Fe(CN)_6]^{4-}$: Ca²⁺ do not depend on the ratio of either component in the mixture, that is the precipitate obtained is constant in composition. The mixed ferrocyanide obtained is represented by the formula Rb2Ca [Fe(CN)6]. Similar results were obtained for the caesium system, the precipitate here being Cs2Ca [Fe(CN)6]. Although results obtained suggested that the formation of the mixed ferrocyanides of calcium could be used for the gravimetric determination of rubidium and caesium, it was found that this could only be done with perfectly pure solutions, since the solubility of the precipitates formed is very strongly affected by the ionic strength of the solution; further, the small difference in the solubilities of the rubidium and caesium salts makes it unlikely that the reaction could be used for separating rubidium and caesium. There are 2 figures, 2 tables,

Card 2/3 and 8 references 2 of which are Slavic.



20-1-32/44

AUTHOR:

Seyfer, A.L.

TITLE:

Anodic Polarizability in Neutral Electrolytes of Alloys of Aluminum with Alkaline Earth Elements (Anodnaya polyarizuyemost' v neytral'nykh elektrolitakh splavov Al so shchelochno-zemel' nymi elementami)

PERIODICAL:

Doklady AN SSSR, 1957, Vol. 116, Nr 1, pp. 120 - 122 (USSR)

ABSTRACT:

It was interesting to study the anodic polarizability of the alloys of aluminum with calcium and of strontium with barium not only in sea water, but also in their "border case models", in the solutions of sodium sulphate and sodium chloride, for the chloride of anodic polarizability in the aforementioned electrolytes may give an indication of the character of the production— or destruction of the protective layers on the surface of the electrode. The first-mentioned alloys will be produced by the dissolution of the corresponding pure retals in aluminum of a high degree of purity under a carnallite layer. The anodic polarizability of these solutions was measured in water of the Caspian Sea and in 0,5 N-solutions of NaCl and Na2SO4 at amperages of the polarization current of up to

Card 1/3

THE RESIDENCE OF THE PROPERTY OF THE PROPERTY

Anodic Polarizability in Neutral Electrolytes of Alloys of Aluminum with Al-

bility of the alloys in seawater to the polarizability in NaCl solution. There are 3 figures, 1 table and 5 references, 2 of which are Slavic.

PRESENTED:

May 23, 1957, by I.I. Chernyayev, Academician

SUBMITTED:

December 12, 1956

AVAILABLE:

Library of Congress

Card 3/3

About the Orthoperiodate of Trivalent Iron

SOV/78-3-10-14/35

There are 2 figures, 1 table, and 6 references, 2 of which are

Soviet.

SUBMITTED: July 17, 1957

Card 2/2

507/78-4-6-25/44 5(2)

Seyfer, G. B., Ionova, Ye. A. AÙTHORS: On the Scandium Ferrocyanides (O ferrotsianidakh skandiya) TITLE:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 6, pp 1362-1368 PERIODICAL:

(USSR)

The system $ScCl_{\frac{\pi}{3}M_4}\left[Fe(CN)_6\right]-H_2O(M=Li, Na, Cs, K and Rb)$ ABSTRACT:

> was investigated by the solubility method, electric conductivity, potentiometric method, and light absorption. The results of the investigation of the system ScCl3-Li4 Fe(CN)6 -H20

are given in table 1 and in figure 1. They show that only a normal scandium ferrocyanide $Sc_4[Fe(CN)_6]_3$ is formed in this

system. The investigation results of the system $ScCl_3-Na_4[Fe(CN)_6]-H_2O$ and $ScCl_3-K_4[Fe(CN)_6]-H_2O$ are given in table 2 and in the figures 2 and 3. The interaction between these systems proceeds initially under formation of normal scandium ferrocyanide - Sc4 [Fe(CN)6]3 and with the increase

of the sodium- and potassium ferrocyanides in the solution, scandium ferrocyanide probably peptizes under formation of

a compound with changing composition -Card 1/2

On the Scandium Ferrocyanides

SOV/78-4-6-25/44

CONTRACTOR OF THE PROPERTY OF

mSc $_4$ [Fe(CN) $_6$] .nMSc [Fe(CN) $_6$] $_3$ in which the ratio m : n depends on the concentration of the alkali metals. The compound of the composition MSc [Fe(CN) $_6$] (M = Na or K) is formed with the increase of the alkali ion concentration. The influence of the alkali metal chlorides on the composition of the produced ferrocyanide was investigated and the results are given in table 3. The investigation results of the systems ScCl $_3$ -Rb $_4$ [Fe(CN) $_6$] -H $_2$ O and ScCl $_3$ -Cs $_4$ [Fe(CN) $_6$] -H $_2$ O are given in table 4 and in the figures 4 and 5. The mixed salts RbSc [Fe(CN) $_6$] and CsSc [Fe(CN) $_6$] are formed in the systems of the ferrocyanides of rubidium and cesium. There are 5 figures, 4 tables, and 6 references, 3 of which are Soviet.

SUBMITTED:

March 28, 1958

Card 2/2

CIA-RDP86-00513R001548220013-5 "APPROVED FOR RELEASE: 08/23/2000

5(2) AUTHOR:

Seyfer, G. B.

SOV/78-4-8-25/43

TITLE:

On the Zeolitic Properties of the Ferrocyanides (O tseolitnykh

svoystvakh ferrotsianidov)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 8, pp 1860-1863

(USSR)

ABSTRACT:

It was found (Refs 1,2) that ferrocyanides dried at 1000 or over a dehydrating agent again absorb humidity from the air. According to reference 3 the addition of ammonia may also take place in this way. The assumption is expressed that ferrocyanides behave in similar way as the natural and synthetic zeolites. For this reason the sorption ability of the ferrocyanides was not only investigated with respect to water but also with respect to alcohol, acetone and toluene. Simple ferrocyanides of divalent metals served as experimental objects: Me₂ [Fe(CN)₆] (Me = Mn, Co, Ni, Zn, Cd, Pb) and their double salts with cesium $\operatorname{Cs_4Ne_4}[\operatorname{Fe}(\operatorname{CN})_6]_3$ and $\operatorname{Cs_2Ne}[\operatorname{Fe}(\operatorname{CN})_6]$. Cesium was chosen because of its marked tendency towards the formation

Card 1/2

of mixed ferrocyanides. The compounds freed from water of

SOY/78-4-8-25/43

On the Zeolitic Properties of the Ferrocyanides

hydration at 120-125° were stored in exsiccators over water, toluene, ethyl alcohol or acetone until the equlibrium constancy was attained. They were then again dried until they had attained their original weight. The data of water adsorption at atmospheric pressure are shown by table 1 and figures 1-3. Table 2 and figure 4 show the dependence of water adsorption of Cs₂Cd [Fe(CN)₆] at different steam pressure. In table 3 and figures 5 and 6 the adsorption data of alcohol, toluene and acetone are given. The reversibility found for the sorption confirms the zeolitic nature of the ferrocyanides of divalent metals. The ferrocyanides of trivalent metals are assumed to behave in similar way. There are 6 figures, 3 tables, and 6 references, 2 of which are Soviet.

SUBMITTED:

April 28, 1958

Card 2/2

5(2,3)

AUTHORS: Tananayev, I. V., Academician, Seyfer, G. B., Ionova, Ye. A.

TITLE: The Niobium Analogue of Phosphorus Nitryl Chloride

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 3,

pp 584 - 585 (USSR)

ABSTRACT: In recent times the interest in high-polymers of inorganic

origin rapidly increased. The substance mentioned last in the title also belongs to the group of this kind which, although known for a long time, has not been of great interest, and is now being investigated most eagerly. It was interesting to explain the possibility of the existence of derivatives of a similar type among elements which are analogues of phosphorus. No published data could be found in this connection. The elements of the arsenic group do not fall within this scope, but the elements of the sub-group of vanadium, in a higher valence stage, are analogous to phosphorus, as far as the structure of the outer electronic shell is concerned. Among them niobium was suited best for

shell is concerned. Among them niobium was suited best for Card 1/3 an introducing investigation. Its higher chloride (which

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The Niobium Analogue of Phosphorus Nitryl Chloride

SOV/20-127-3-29/71

is lacking in vanadium) can be immediately used according to the experimental method which is analogous to that of the production of phosphonitrile chloride (Refs 1-6). The method of reference 4 was easiest for the authors, since it allows an observation of the degree of the reaction course, according to the rate of the HCl separation. The developed product is a finely crystalline yellowy brown powder, resistant in air, but slowly hydrolyzable in water. In benzene, toluene, dichlorethane, CS₂, CCl₄ and ethylether it is not noticeably soluble. Analytic results are given. The given data show that the original supposition regarding the possibility of the existence of a niobium compound with a composition analogous to that of phosphonitrile chlorides, has been proved. The investigation of their properties is still going on. There are 6 references, of which 1 is Soviet.

Card 2/3

The Niobium Analogue of Phosphorus Nitryl Chloride SOV/20-127-3-29/71

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova

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May 15, 1959 SUBMITTED:

Card 3/3

sov/78-5-1-12/45

5 (2)

Seyfer, G. B.

AUTHOR:

On the Thermal Decomposition of the Ferrocyanides of Iron

TITLE:

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 1, pp 68 - 72 (USSR)

ABSTRACT:

The author refers to data contained in publications concerning the thermal stability of ferrocyanides of iron (Refs 1-8), which are based solely on the analysis of decomposition products, and reports on his results obtained by plotting thermograms, Debye patterns, and chemical analysis. He investigated the compounds Fe4[Fe(CN)6]3 and CsFe[Fe(CN)6]. The thermal decomposition was investigated in argon atmosphere by the use of a Kurnakov pyrometer (Fig 1). The decomposition of Fe₄[Fe(CN)₆]₃ begins already at room temperature, with a part of the bivalent iron passing from the complex anion to the outer sphere, while at the same time the Fe of the outer sphere is reduced and the liberated cyanogen polymerizes to cyanurcyanide. This reaction is completed at 205°. At 260°, viz near the boiling point of

Card 1/2

On the Thermal Decomposition of the Ferrocyanides of Iron SOV/78-5-1-12/45

cyanurcyanide (hexacyanogen) cyanogen polymers separate. On further heating the composition of the solid phase remains unchanged. The effect observed at 405° is interpreted as being a depolymerization of Fe₂[Fe(CN)₆] to simple Fe^{II} cyanide. Also the Debye pattern (Fig 2) of the sample heated to 420° points to a sweeping change of the crystal structure. The further decomposition of ferrocyanide takes place under the formation of cementite, free carbon, and free nitrogen, which was volume= trically determined. This reaction is completed at 560°. The slight exothermal effect observed at 660° can be probably explained by a polymorphous transformation of cenentite. The thermogram of CsFe[Fe(CN)6] (Fig 3) shows the same course, the effects, however, are less intense due to the lower iron content of the compound. The single additional thermal effect at 745° is explained by the melting of the liberated cesium cyanide. There are 3 figures and 12 references, 3 of which

SUBMITTED: Card 2/2

October 29, 1958

are Soviet.

SEYFER, G.B.

Thermal decomposition of copper ferrocyanice. Zhur.neorg.khim. 7 no.3:482-486 Mr 162. (MIRA 15:3)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova AN SSSR. (Copper ferrocymide)

Thermal decomposers and the composers and the composers are necessary are necessary and the composers are necessary and the co	position of alkal 7 no.6:1242-1246 (Alkal	i metal ferrocyanid , je '62. i metal ferrocyanid	es. Zhur (MIRA 15:6) es)	
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TANANAYEV, I.V., akademik: SEYFER, G.B.

Normal orthophosphate of niobium. Dokl. AN 3SSR. 144 no.6:1314-1315 Je 162. (MIRA 15:6)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova Akademii nauk SSSR. (Niobium phosphates)

